REMARKS

Claims 1-10 are pending in the application. Claims 11 and 12 are added. Claims 1-10 stand rejected. Claim 1 is an independent claim.

Claims 11 and 12 have been added. The support for each claim can be found in FIG. 4.

The Detailed Description has been amended to conform to FIG. 5.

Figures 1 and 2 stand objected for failing to include indications that the figures are prior art. In response, the Applicant submits new Figures 1 and 2. The Applicant requests withdrawal of the objection.

Claim 7 stands rejected under 35 U.S.C. 112, second paragraph, as allegedly being indefinite. The Office Action indicates that the wavelength-division multiplexer and the time-division multiplexer are incapable of demultiplexing signals (the present Office Action, page 3).

The Applicant, as its own lexicographer, has defined a "multiplexer" described in the present application as a component that multiplexes signals (page 10, line 5-6 and line 15-17 of the present application; FIG. 4, component 430 and 470 of FIG. 4) and that demultiplexes signals (page 11, line 4-5; FIG. 5, component 510) based on its orientation relative to the input and output signals (FIG. 4 and 5). As such, claim 7 is definite, and the Applicant respectfully requests withdrawal of the rejection.

Claim 1 stands rejected under 35 U.S.C §102(e) as allegedly being anticipated by Combs *et al.* (U.S. 6,751,417) ("Combs").

Claim 1 recites "an optical line termination **configured to time-division multiplex received digital broadcast signals**, [and] **configured to wavelength-division multiplex the time-division multiplexed digital broadcast signals and the communication signals**."

According to the United States Court of Appeals for the Federal Circuit, a claim is anticipated only if a single prior art reference **set forth each and every feature** recited in a claim (*Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)).

In rejecting claim 1, the Office Action indicates that the OLT of claim 1 is set forth by the Mux-Node 103, 105, and 107 of Combs.

Combs, as read by the Applicant, discloses three different Mux-Nodes 103, 105, and 107. However, none of the three Mux-Nodes 103, 105, and 107 is configured to time-division multiplex received digital broadcast signals, and to wavelength-division multiplex the time-division multiplexed digital broadcast signals and the communication signals.

In particular, Combs discloses that the first example Mux-Nodes 103 is merely configured to performs WDM process to a first downstream signal containing analog broadcast signal (the "first downstream signal") and a second downstream signal containing digital information (the "second downstream signal") via the first and second lightwave interface devices 322 and 330 (column 5, line 51-58). The second example Mux-Nodes 105, meanwhile, is not disclosed to be configured to perform TDM process to digital broadcast signals and configured to perform WDM process to the TDM digital broadcast signals and to the communication signals (see column 6, line 10-27).

Further, the third example Mux-Node 107 is configured to *demultiplex* the second downstream signals via a mux/demux/router 308. However, nowhere does Combs disclose that the third example Mux-Node 107 or any component therein is configured to perform TDM process to digital broadcast signals and configured to perform WDM process to the TDM digital broadcast signals and to the communication signals.

As such, the Applicant respectfully submits that Combs does not set forth or anticipate "an optical line termination **configured to time-division multiplex received digital broadcast signals,** [and] **configured to wavelength-division multiplex the time-division multiplexed digital broadcast signals and the communication signals,**" as recited in claim 1. The Applicant respectfully requests withdrawal of the rejection.

Claim 4 stands rejected under 35 U.S.C §103(a) as allegedly being obvious over Combs in view of Ahmed *et al.* (U.S. 6, 519,773) ("Ahmed").

Claim 4 recites that the optical line termination of the present invention comprises "a first wavelength-division multiplexer **being coupled to the first time-division multiplexer,** being configured to **wavelength-division multiplex** the communication signals and the time-division multiplexed digital broadcast signals that is also format converted."

To reject a claim under section 103, the United States Court of Appeals for the Federal Circuit required a showing of **an unrebutted *prima facie* case of obviousness** (*In re Rouffet*, 149 F.3d 1350, 47 USPQ2d 1453 (Fed. Cir. 1998)). According to United States Court of Customs and Patent Appeals, the predecessor to the Federal Circuit, the *prima facie* case can be established only if the prior art references teach **all features** in the claims (*In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1970); see also MPEP 2143.03).

If the claim is rejected over a combination of prior art references, there must be a suggestion or motivation to combine the references (*In re Rouffet*, 149 F.3d 1350, 1355, 47 USPQ2d 1453 (Fed. Cir. 1998)). The combination cannot be based on "the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention" (id., at 1357). In other words, the reason to combine the references cannot be based on the advantage of the invention disclosed by the patent applicant (see id.).

In rejecting claim 4, the Office Action acknowledges that Combs does not teach either a format converter or a time-division multiplexer (the present Office Action, page 6-7). Nevertheless, the Office Action assert that claim 4 is obvious, as Ahmed remedies the deficiencies of Combs by disclosing a plurality of formatter and a time-division multiplexer (id.). To support the rejection over two references, the Office Action indicates that "formatting the broadcast signals and Time-division-multiplexing those **signals allow addition channels to be easily added as necessary**.... This way efficient use of bandwidth can be achieve[d]" (id.).

The Applicant respectfully submits that claim 4 is patentable over Combs and Ahmed on two grounds.

First, claim 4 is patentable over Combs and Ahmed, as the references, alone or in combination, fail to teach all features of claim 4. In particular, Combs, as noted in the Office Action, teaches **neither the format converter nor the time-division multiplexer**. As such, Combs does not disclose "a first wavelength-division multiplexer **being coupled to the first time-division multiplexer**, being configured to **wavelength-division multiplex** the communication signals and the time-division multiplexed digital broadcast signals that is also format converted," as recited in claim 4.

Ahmed, as read by the Applicant, discloses a Cable TV network (the "CATV network") containing a plurality of formatter and a time-division multiplexer coupled to each formatter (FIG. 4). However, Ahmed does not teach that its time-division multiplexer is **coupled to** a wavelength division multiplexer (FIG. 4). In addition, Ahmed does not teach that any component within its network is configured to **wavelength-division multiplex** the communication signals and the time-division multiplexed digital broadcast signals that is also format converted.

As such, Ahmed also fails to teach "a first wavelength-division multiplexer **being**

coupled to the first time-division multiplexer, being <u>configured to</u> **wavelength-division multiplex** <u>the communication signals and the time-division multiplexed digital broadcast signals that is also format converted</u>," as recited in claim 4.

As both Combs and Ahmed fail to teach all features of claim 4, the references, alone or in combination, fail to render claim 4 obvious.

Second, the Applicant respectfully submits that claim 4 is patentable over Combs and Ahmed, as no motivation to combine the two references exists. As noted at page 13-14 of the Detailed Description, the present invention, contrary to the prior art, achieves efficient use of the bandwidth by unifying digital broadcast and internet activities via, among others, TDM and WDM mechanisms (see also page 4-5 (disclosing disadvantage of the prior art)). However, **the Office Action uses the same advantage of the present invention as the rationale to combine Combs and Ahmed** (see id. and the rationale provided by the Office Action).

By combining Combs and Ahmed based on the advantage of the present invention, the Office Action simply uses the Applicant's disclosure "as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention," and rejects claim 4. The Applicant respectfully submits that such **rejection is explicitly prohibited by the Federal Circuit** (*In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453 (Fed. Cir. 1998)).

As such, the present rejection cannot be sustained, and the Applicant respectfully requests withdrawal of the rejection.

Other dependent claims in this application are each dependent on the independent claim 1 and believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of the patentability of each on its own merits is respectfully requested.

Amendment
Serial No. 10/621,588

Should the Examiner deem that there are any issues which may be best resolved by telephone, please contact Applicant's undersigned representative at the number listed below.

Respectfully submitted,

By: _Steve Cha_
Attorney for Applicant
Registration No. 44,069

Date: _10/31/06_

Mail all correspondence to:
Steve Cha, Registration No. 44,069
Cha & Reiter
210 Route 4 East, #103
Paramus, NJ 07652
Tel: 201-226-9245
Fax: 201-226-9246

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Steve Cha, Reg. No. 44,069
(Name of Registered Rep.)   (Signature and Date)

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IN THE DRAWING

Please replace the original FIG. 1 and 2 with the FIG. 1 and 2 contained in the Replacement

Sheet: